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No. 00-00-249

IN THE

Supreme Court of the United States

OCTOBER TERM, 2000

ATLANTIC RICHFIELD COMPANY, CHEVRON U.S.A., INC., EXXON MOBIL CORPORATION, MOBIL OIL CORPORATION, SHELL OIL PRODUCTS COMPANY, AND TEXACO REFINING AND MARKETING, INC.,

Petitioners,

v.

UNION OIL COMPANY OF CALIFORNIA,

Respondent.

On Petition for a Writ of *Certiorari* to the United States Court of Appeals for the Federal Circuit

MOTION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF AND BRIEF OF *AMICUS CURIAE* GENERAL MOTORS CORPORATION IN SUPPORT OF PETITION FOR *CERTIORARI*

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September 14, 2000

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DISCLOSURE STATEMENT

Pursuant to Supreme Court Rules 24.1(b) and 29.6, General Motors Corporation hereby declares that it has no parent corporations. No publicly held company owns more than 10% of the stock of General Motors Corporation.

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MOTION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF BY GENERAL MOTORS CORPORATION IN SUPPORT OF PETITION FOR *CERTIORARI*

Pursuant to Supreme Court Rule 37.2(b), General Motors Corporation ("General Motors" or "GM") respectfully requests leave of the Court to file this brief *amicus curiae* in support of Petitioners, Atlantic Richfield Company, et al.[1] Counsel for all Petitioners have consented by letter to the filing of this brief.

[1] Pursuant to Supreme Court Rule 37.6, General Motors states that no counsel representing a party to this case authored this motion or brief in whole or in part and that no person or entity other than General Motors Corporation or its counsel made a monetary contribution to the preparation or submission of this motion or brief.

An original letter of consent will be lodged with this Court. Counsel for Respondent, Union Oil Company of California, has withheld its consent, necessitating this motion.

IDENTITY AND INTERESTS OF *AMICUS CURIAE*

General Motors is the world's largest automotive manufacturing corporation. GM employs more than 388,000 people and works with over 30,000 supplier companies worldwide.

For the North American market, GM designs, manufactures, and markets vehicles for the Buick, Cadillac, Chevrolet, GMC, Oldsmobile, Pontiac, Saab, and Saturn nameplates. In 1998, GM North America produced approximately 5 million vehicles, had sales and revenues of $94.2 billion, and employed 229,000 people. GM also has substantial interests in digital communications, financial and insurance services, locomotives, and heavy-duty automatic transmissions. GM has more than 260 major subsidiaries, joint ventures, and affiliates around the world.

When its interests are affected or where its participation may prove helpful to this Court, General Motors has regularly filed briefs *amicus curiae*. *See, e.g., Geier v. American Honda Motor Co.*, 120 S. Ct. 1913 (2000); *Medtronic, Inc. v. Lohr*, 518 U.S. 470 (1996).

GM's interests are adversely affected by the enforcement of the patent at issue in this case. The control of motor exhaust emissions today requires a systems approach, in which sophisticated emissions control hardware on the vehicle is combined with the use of "low-emission" gasolines in the engine. Gasoline-powered GM cars and trucks will not provide optimal emissions control performance unless they are operated on those "low emission" fuels, which permit the most efficient possible operation of their engines.

As explained more fully below, the Unocal patent at issue in this case and other Unocal patents derived from this one

cover some of the most important fuel properties needed for optimal control of vehicular emissions. Refiners not owned or operated by Unocal can be expected to act in an economically rational manner. Faced with the prospect of paying royalties to Unocal under the patent contested here, the refiners will predictably choose to produce fuel blends that are not optimal for modern vehicles, since that choice will be cheaper – even though making that choice will impose large social costs in terms of increased vehicle emissions.[2]

The consequences of refiners acting in the economically rational manner will be disbeneficial for GM and the motoring public. If the cleanest possible gasolines are not plentifully available, GM and other vehicle manufacturers will face increased pressure to try to reduce emissions further with additional emissions-control hardware on the vehicle. That additional hardware, in turn, will increase the costs of new vehicles and complicate GM's efforts to build simple and durable emissions-control systems.

General Motors' participation in this case will also bring to the Court's attention matters that might otherwise go unnoticed. GM is a leader not only in the production of new motor vehicles but also in research on motor vehicle fuels. GM participated in the same environmental regulatory processes that gave rise to the "low-emission" gasoline rules whose implementation has been stymied by the Unocal patent. GM's *amicus curiae* brief explains why, using peer-reviewed scientific and automotive engineering literature, this case has exceptional importance to the nation's efforts to reduce automotive emissions and achieve improved air quality.

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[2] *See* Senate Agriculture Committee Hearings on Energy Cost and Agriculture, 2000 WL 23831729 (July 20, 2000) (statement of James McCarthy, General Manager, CITGO Petroleum Corporation) ("CITGO's Lake Charles Refinery has the ability to produce about 15,000 barrels per day of summer grade RFG, but to avoid the patent issue, we have cut production to about 4,000 barrels per day.").

Based on the foregoing, General Motors hereby moves to file the following brief *amicus curiae* in support of Petitioners in this case.

Dated: September 14, 2000

Respectfully submitted,

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INTRODUCTION AND SUMMARY OF ARGUMENT

This is a highly significant case, with far-reaching patent-law ramifications, as well as for the nation's efforts to improve air quality. In this case, two judges comprising the majority of a Federal Circuit panel blessed a naked attempt by a refiner to hijack a series of environmental regulations for its own benefit. The results are (1) a significant reduction in the environmental benefits that could otherwise have been achieved by the pertinent regulations, (2) the imposition of millions of dollars of unnecessary cost on the national economy, (3) increases the prices of gasoline, (4) gasoline supply shortages, and (5) the perversion of the proper functioning of the patent laws.

The Court should not countenance those results. It should grant review because two fundamental legal errors were made in this case.

First, the Federal Circuit entirely ignored the regulatory context in which Unocal sought and obtained this patent, turning a blind eye to Unocal's effort to hijack the regulatory process for private gain – a move that resulted here in no invention enriching society and which, as a result, runs afoul of numerous patent-law doctrines. The patent laws of this country were not intended to permit one company falsely to claim "invention" of basic, long-understood relationships between the chemical composition of gasolines and the efficient operation of the motor vehicle engines in which those fuels are used.

Second, the Federal Circuit upheld the validity of Unocal's patent despite the fact that it was wholly anticipated by high-performance automotive gasolines that were well-known in the refining industry and used in such prominent applications as automotive endurance and racing trials. The Federal Circuit shook two important pillars of patent law. It effectively inserted new text into the claims actually made by Unocal. And it condoned the grant of a new patent for what amounted to a self-evident new use for an old product.

ARGUMENT

I. This Case Is Exceptionally Important to National Environmental Policy and the Economy.

Each year, the nation spends tens of billions of dollars to control emissions from the sources of urban air pollution.[3] A major portion of that investment in cleaner air has been made in the technologies needed to reduce emissions from motor vehicles. Under the test conditions specified by EPA, a typical new car sold in America is the cleanest in the world, and produces tailpipe emissions of hydrocarbons that are less than five percent of similar emissions from new cars sold in the 1960s, prior to emission controls.[4]

Most of the emissions reductions that have been achieved in automobiles have been the result of the improved vehicle hardware, starting with catalytic converters, coupled with the various sophisticated computer controls used on modern engines. Much more recently, EPA and the State of California have begun to require gasoline refiners to produce "clean" gasolines that help cars and trucks to control emissions not only under laboratory conditions, but also in ordinary use on the road under everyday driving conditions.

As indicated by Petitioners, the '393 patent will greatly increase the cost of gasoline in California, in part by making it more expensive for refineries to meet California's requirements. *See* Pet. at 9-11. There is, however, much more at stake for the rest of the nation if the Unocal patent is enforced.

Efforts by the oil industry to blend gasolines that avoid Unocal's royalties can be predicted to increase the level of

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[3] U.S. Environmental Protection Agency, THE BENEFITS AND COSTS OF THE CLEAN AIR ACT, 1970 TO 1990, at ES-2 (Oct. 1997).

[4] U.S. Environmental Protection Agency, Office of Mobile Sources, Fact Sheet OMS-12: Milestones in Auto Emissions Control (Aug. 1994).

automotive air pollution in some of America's largest urban centers. This will frustrate the intent of more stringent motor vehicle emissions standards set by the government, and squander the public's investment in cleaner vehicle technologies.

A. The Loss of Proper Gasoline Volatility Controls

Some background on the interaction between gasoline and the modern internal combustion engine is necessary in order to appreciate the adverse environmental effects of the '393 patent on automotive emissions control.

Gasoline is composed of hundreds of different chemical compounds, which are refined for use in spark-ignited automotive engines. The "volatility" of gasoline – which is its propensity to change from a liquid to a vapor state – is critical to the proper operation of an internal combustion engine.

Strictly speaking, a gasoline engine does not operate on liquid gasoline – it depends upon the combustion of gasoline *vapor* and oxygen to release the energy in the gasoline tank and propel the vehicle down the road.[5] Gasoline must be vaporized to the greatest possible degree in order to burn properly and completely in the combustion chamber for maximum efficiency, and to obtain the lowest emissions of unburned fuel and the best engine performance.

If the specific quantity of gasoline injected into the combustion chamber fails to vaporize completely, unstable combustion will result. This often causes engine misfire, roughness in engine operation potentially leading to stalling, and substantial increases in unburned-fuel hydrocarbon emissions. Even the best gasoline engines are especially sensitive to misfire and increased hydrocarbon emissions – especially during engine warm-up where sufficient engine heat

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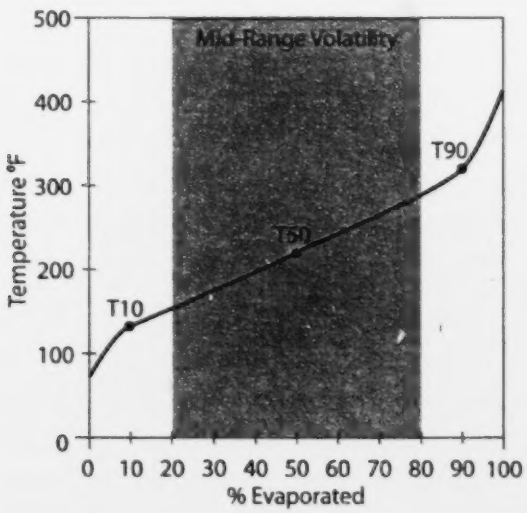
[5] John B. Heywood, INTERNAL COMBUSTION ENGINES: FUNDAMENTALS 4 (1988).

is not available to help in vaporizing the gasoline, and the catalytic converter has not yet reached operating temperature.[6] The use of gasolines with optimal volatility characteristics is therefore particularly central to clean engine operation.

Gasoline volatility is measured in a number of different ways. A common method of representing gasoline volatility is called the distillation curve, which tracks the temperature at which a specific percentage of the gasoline moves from the liquid to the vapor state. A typical distillation curve for gasoline is shown on Figure 1 below.[7] On Figure 1, the *y*-axis shows the temperature to which a given sample of gasoline is heated; the *x*-axis shows the percentage of gasoline evaporated as the gasoline is heated. The three dots along the distillation curve indicate three points at which volatility is routinely measured: the "T10" point, indicating the temperature at which 10 percent of the gasoline will vaporize, the "T50" point at which 50 percent will vaporize, and the "T90" point at which



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[6] *See, e.g.*, J. C. Ellis, *Future Automotive Fuels*, SAE Technical Paper Series No. 720617, 118 (1971).

[7] Adapted from D. A. Patterson and N. A. Henien, EMISSIONS FROM COMBUSTION ENGINES AND THEIR CONTROL 55 (1972).

90 percent will vaporize.

The so-called "mid-range" volatility of gasoline, shown in the shaded area of Figure 1 around the T50 value, is the main area of concern here. The '393 patent applies as a general matter to gasoline blends with a T50 value of less than 215° F. Any blend with a T50 of 215° F or below may come within the scope of the Unocal patent and require royalties. The practical effect of the Unocal patent is thus to create an economic incentive for non-Unocal refiners to blend gasolines with a T50 value above 215° F. That option is entirely within the requirements of EPA regulations, but it nonetheless inevitably increases tailpipe emissions for the reasons explained below.

The peer-reviewed technical literature, which includes data from General Motors and many other research organizations over many years and under a wide variety of engine operating conditions, demonstrates conclusively that gasolines with higher mid-range (T50) volatilities will produce higher emissions under normal operating conditions. The reason for this is simple. Gasolines with a relatively high T50 value – those needed to avoid the Unocal patent – will be slow to vaporize, especially during the time before the converter is "warmed up" and able to work efficiently.

If a gasoline has a higher T50 value than covered by the Unocal patent, a significant portion of the hydrocarbon compounds in the gasoline will pass through the engine and the catalytic converter during the initial operation of the engine, and enter the atmosphere.[8] Once in the atmosphere, those hydrocarbons can contribute to the formation of urban ozone or "smog" conditions in the troposphere – a phenomenon of longstanding concern to Congress in the Clean Air Act, and the

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[8] Kenji Kanehara et. al., *Analyzing the Influence of Gasoline Characteristics on Transient Engine Performance*, SAE Technical Paper Series No. 912392, 7 (1991); J. C. Ellis, *Future Automotive Fuels*, SAE Technical Paper Series No. 720617, 118 (1971).

target of huge national expenditures.[9]

One theoretical solution to the problem of gasolines with excessive T50 values might be to require vehicles to pass tailpipe hydrocarbon emissions tests when operated on these higher volatility fuels. That result would be perverse – indeed, the very aim of the EPA regulations that govern in this area would be frustrated by requiring additional regulation and even greater expenditures of public and private resources.

Even that alternative, however, would address only a small part of the problem. For there is essentially no way the government could impose a new tailpipe emissions testing standard on the more than 175 million gasoline-powered cars and light trucks already on the road in the U.S. today.[10] Once a vehicle has been designed and assembled at the factory, and then sold to the public, its basic emissions control properties, as a practical matter, cannot be altered in the field.

For those 175 million vehicles already on the road, most of which will remain in service for more than 10 years,[11] the shift upward in mid-range volatility that is entirely predictable as an economic matter as a result of the Unocal patent will inexorably increase emissions levels. EPA, the States, and the automobile industry cannot take any practical steps related to the hardware already on those vehicles to address the problem created by widespread use of gasolines with poor mid-range volatility properties.

To put the matter in context, consider the impact of a 4 percent increase in hydrocarbon emissions from the fleet of 175

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[9] *See, e.g.*, 42 U.S.C. §§ 7511-7511a (classification of ozone "nonattainment" areas and measures required to reduce ozone in such areas); note 3 *supra* (cost estimates for national emissions control measures).

[10] MOTOR VEHICLE FACTS AND FIGURES, 37, 39 (Ward's Communications 1999). This number includes all U.S. vehicles outside California.

[11] California Air Resources Board, EMFAC 2000 Emission Inventory Model Version 1.99 (May 2000).

million gasoline-powered light-duty vehicles reported to be in daily use. An increase of that magnitude is expected from an 8.8 percent shift in T50, according to the literature.[12] The national vehicle population (excluding California, which has its own emission regulations) would experience an increase of almost 21,000 tons in hydrocarbon emissions over a typical "ozone season," which in most U. S. cities lasts about 90 days a year, stretching from late spring until late summer.[13] In terms of additional sources of smog-forming emissions, that is the equivalent of placing about nine million additional cars on the road in America's most congested urban areas.

B. The Economic Impact of the '393 Patent

The vices of Unocal's patent are not limited to its environmental consequences. The District Court's disposition of this case, affirmed by the Federal Circuit, has increased the cost of producing a gallon of gasoline covered by the Unocal patent by 5.75 cents per gallon. Of course, that increased cost to refiners and the higher prices paid by consumers have redounded to Unocal's benefit. *See, e.g., High Crude Prices, Patent Victory Push Unocal to Record Earnings in Second Quarter*, A.P. NEWSWIRES, July 27, 2000. Not surprisingly, this result deserves the considerable attention it has attracted from members of Congress[14] and from the media.[15]

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[12] An increase of 8.8% in T50 is the average difference between fuels above and below the Unocal limit of 215° F. The EPA's "Complex Model," described in 62 Fed. Reg. 68,196 (Dec. 31, 1997), calculates the emission increase that results from changes in fuel properties.

[13] Increase applied to light-duty vehicle hydrocarbon emission inventory published in U.S. Environmental Protection Agency, NATIONAL AIR POLLUTION TRENDS, 1900-1996, App. B.

[14] In addition to the hearings held by the Senate Agriculture Committee, referred to *supra* note 2, the Senate's Committee on Energy and Natural Resources held hearings (*see, e.g.*, Senate Committee on Energy and Natural Resources Hearings on Gasoline Supply Problems, 2000 WL 23831565 (July 13, 2000) (statement of Red Cavaney, President and CEO, American

(continued...)

Indeed, both the Federal Trade Commission and the Congressional Research Service have concluded that the Unocal patent may be one ingredient in the dramatic increase in retail gasoline prices throughout the Midwest this past summer. According to the FTC, the Federal Circuit's decision

> upholding Unocal's patent for some formulations of RFG may have caused some refineries to change RFG blends in an apparent effort to avoid infringement or high royalty payments, leading to production delays and decreased refinery throughput.

Midwest Gasoline Prices, Presented by FTC Chairman Robert Pitofsky, Before the Committee on Commerce, U.S. House of Representatives (June 28, 2000), *available at* <www.ftc.gov/OS/2000/06/gasolinecommerce.htm>; *see also* Congressional Research Service, *RL30592: Midwest Gasoline Prices: A Review of Market Developments* (June 28, 2000),

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[14] (...continued)
Petroleum Institute)), as did the House Commerce Committee, (*see, e.g.*, Pet. at 10), and the House Judiciary Committee (*see, e.g.*, House Judiciary Committee Hearings on Solutions to Competitive Problems in the Oil Industry, 2000 WL 23831097 (June 28, 2000) (statement of Chairman Henry J. Hyde)).

[15] *See, e.g., Clean Air, Empty Pockets*, THE WASH. TIMES, Sept. 10, 2000, at B2; Alexei Barrionuevo, *Majors Battle Unocal over Clean Gasoline Patent*, HOUSTON CHRON., Aug. 27, 2000, at 9; *California Southland Focus: Unocal to Seek More Damages in Patent Suit*, L.A. TIMES, Aug. 17, 2000 at C2; *Patent Case Could Threaten Enviro Compliance*, 10 AMERICAN POLITICAL NETWORK – GREENWIRE, No. 9, Aug. 17, 2000; *Gasoline Price Spikes Spark US Political Firestorm*, OIL AND GAS J., July 10, 2000, at 22; Tom Hamburger, *Ciresi Case Examined in Gasoline Price Increases: Oil Company Patent Case May Have Had Role, Some Say*, STAR-TRIBUNE, July 6, 2000, at 10A; Christopher Palmeri, et al., *Who's to Blame? OPEC? Refiners? Speculators? Regulators? Yes, Yes, Yes, and Yes*, BUSINESS WEEK, July 3, 2000, at 36; Frank Dabbs, *Bottom Lines*, OILWEEK, July 3, 2000, at 46; *Finding Relief for Motorists the Issue*, DENVER ROCKY MOUNTAIN NEWS, July 3, 2000, at 41A.

available at <http://www.cnie.org/nle/eng-62.html#Patented RFG>.

II. Patent Applicants Should Not Be Permitted Merely to Anticipate Regulatory Requirements, Nor to Adapt Such Opportunistic Patents to Final Regulatory Requirements Through the Process of Amendment.

The Unocal patent at issue here can only be understood against the background of the regulatory and engineering framework set forth above. Under any reasonable understanding of the patent laws, Unocal's "discovery" should not be patentable at all. Quite simply, Unocal's patent rests on nothing more than a prediction of the shape and form of California regulations (at the patent-application stage) or a regurgitation of those California regulations (after the regulations were issued, and as the patent was being amended).

The Unocal patent *does not* involve a situation like the one where regulators (in California or elsewhere) imposed stricter standards for tailpipe emissions and the result was the invention of the catalytic converter. *Compare General Motors Corp. v. Toyota Motor Corp.*, 667 F.2d 504 (6th Cir. 1981) (upholding GM's patent on a type of catalytic converter), *cert. denied*, 456 U.S. 937 (1982). The catalytic converter was an innovative device whose *invention* was necessary to comply with such regulations – but, in no sense was it a device which was simply a direct outgrowth or nearly complete regurgitation of the regulations themselves. A typical clean-air environmental regulation which provides that only *x* grams per mile of nitrogen oxides (a precursor to smog formation), *see, e.g.*, Clean Air Act § 202 Table G, 42 U.S.C. § 7521 Table G, may be emitted by a vehicle does nothing to inform vehicle manufacturers how to achieve such an emissions level. Yet Unocal's patent essentially does nothing more than play back the regulations themselves.

The California RFG regulations that were being developed in the 1990s by the California Air Resources Board ("CARB") and refiners (including Unocal) define the entirety of Unocal's supposed innovation. The California RFG regulations at issue, for example, provided limits on Reid Vapor Pressure ("RVP"), T50 (temperature causing 50% evaporation), T90 (temperature causing 90% evaporation), olefins, paraffins, and aromatics (three different types of hydrocarbons), as well as an octane rating. The claims made by Unocal in the '393 patent impose similar limits. *See* Pet. App. 58a-64a.

Against the regulatory backdrop, it is impossible to conceive of the '393 patent and the claims based upon it as contributions to "Science and [the] useful arts."[16] Unocal did not design a new emissions control device like the catalytic converter to meet a new regulatory goal. All that Unocal did was to parrot the essence of the regulatory limits set by CARB. Indeed, Unocal admitted that its patent was filed in anticipation of CARB's regulations. *See* JA379, 564-65.

Perhaps it would have been a contribution to human knowledge sufficient to warrant patent protection if Unocal's engineers had run thousands of empirical tests on a range of fuel compositions permissible under the California regulations, in order to discover the narrow range of compositions that were optimal in meeting some specific metric – such as the maximum feasible emissions reduction under a given set of test condition at the lowest possible cost. That is manifestly not what happened here. Unocal's only "insight" was that controlling certain chemical properties in gasoline would reduce emissions – an insight wholly captured by the California regulations, and in any event well-known in the automotive and oil industries for many years before.[17]

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[16] U.S. Const., art. I, section 8, cl. 8.

[17] For its part, GM had launched the campaign for cleaner gasolines in the

(continued...)

Nevertheless, as the undisputed evidence in the record demonstrates, the Unocal patent does not *represent* a discovery even in that limited sense – instead, it covers literally "trillions" of combinations under the regulations. JA742-43. As a Unocal representative stated after the patent was issued and was first made known to CARB and to the refining industry, "almost any gasoline that would be practical to make and meet the [CARB] requirements would fall under the scope of our patent." JA473.

It is also critical to note one more point in the strange history of the Unocal patent – namely, how it was amended to take account of the final form of the regulations. That history appears on pages 3-4 and 15-16 of Petitioners' brief. In GM's view, the most striking example of Unocal's regulatory opportunism is Unocal's treatment of the olefin content of "low-emission" fuel. Excessive olefin content in gasoline can lead to engine gumming and valve sticking, and therefore olefin content must be controlled to ensure optimal engine operation.

At first, Unocal asserted in its patent application that the "best" emissions results were to be achieved by driving olefin levels down to "essentially zero." After CARB's regulations failed to require that level of control, Unocal amended its patent to mirror the requirements of the regulations. *See* JA465. This example surely undermines any attempt by Unocal to argue that, while the insight of altering relevant chemical properties of gasoline to reduce emissions was known to regulators and to the auto and oil industries, Unocal's contribution was to determine by *how much* to alter those

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[17] (...continued)
technical community almost a generation ago. *See GM Still Wants Costly Light Gasoline*, OIL AND GAS J. (Oct. 2, 1972) ("General Motors has put refiners on the spot again to come up with a radically new, more costly gasoline to help meet clean-air standards for 1975 model autos."); *GM Bids for Radically New Gasoline*, OIL AND GAS J. (Jan. 17, 1972) (providing GM's specifications for a new gasoline that would enable it to meet tighter emissions standards, including, *inter alia*, limits on RVP, T10, T50, T90, olefins, and aromatics).

chemical properties to achieve optimal emissions benefits.

The need to protect innovation is the driving force of the patent laws. *See* U.S. Const. art. I, sec. 8, cl. 8 ("The Congress shall have Power . . . To promote the progress of science and useful Arts, by securing for limited Times to Authors and *Inventors* the exclusive Right to their respective Writings and *Discoveries*.") (emphasis added); 35 U.S.C. § 101 ("Whoever *invents or discovers* any *new* and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore . . . .") (emphasis added).

Because there is no innovation by Unocal involved in its '393 patent, that patent should have been invalidated by the lower court. The majority of the Federal Circuit panel declined to do this based on a fundamental misapprehension of the constitutional and statutory scope of the patent law under this Court's well-established precedent stretching back at least as far as *Pope Manufacturing Co. v. Gormully*, 144 U.S. 224, 234 (1892). This is that unique case under patent law where the thing claimed to be patented – far from being a novel invention – was simply a recasting of regulatory requirements in the form of sweeping claims that are entirely self-evident.

The Federal Circuit's majority turns a deaf ear to a series of congressional actions and judicial decisions warning the need for a careful inquiry into the interactions between patent law and regulatory law. *See, e.g., Eli Lilly and Co. v. Medtronic, Inc.*, 496 U.S. 661 (1990) (exploring relationship between the patent laws and the medical device regulatory schema in light of an amended Food, Drug, and Cosmetic Act). The failure to consider regulatory background here exposes the crippling weaknesses in the Federal Circuit's opinion.

For example, in response to the argument that no specific chemical compositions for the fuel being patented were specified, the Federal Circuit answered that those skilled in the art of refining know how to mix petroleum stocks to achieve

any set of specific properties, and thus a list of chemical properties in the '393 patent is equivalent to instructions on how to use the patent in learned practice. *See* Pet. App. 3a. But in the context of the CARB regulations, which can be read to make similar chemical-property "claims," it is apparent that there is no innovation – nothing new – in Unocal's '393 patent that CARB itself did not "invent" when it wrote its regulations.

Similarly, the Federal Circuit responds to the argument that the Unocal patent is invalid because it does not prescribe a precise set of chemical properties, but rather ranges of properties, by stating that this "form of description does not offend [35 U.S.C.] § 112." Pet. App. at 15a (citation omitted). According to the lower court, this is so because the list of ranges for chemical properties would allow a skilled refiner to produce a specific gasoline blend, and thus, in context, Unocal's claims are a specific-enough set of instructions. *See id.*

But that rationale collapses back into the Federal Circuit's earlier explanation for why it was not necessary for Unocal to state its claims in terms of a specific chemical composition. The same weaknesses appear again once the role of the CARB regulations is considered – CARB defined the range of required chemical properties and Unocal simply repeated them or modified them. That is no basis for a valid patent. Rather, it is a recipe for defeating the very purpose of reformulated gasoline regulations, since the imposition of Unocal's royalties will encourage non-Unocal refiners to blend away from Unocal's "discovery" to the detriment of the motoring public and environmental protection.

Additionally, it is plain that the CARB regulations themselves also implicitly state ranges because they set chemical-property cut-off points that must be met for any gasoline that is to be lawfully sold.

III. The Lower Courts Here Should Never Have Validated a Patent Resting Purely on Preexisting Innovations and Did So Only by Ignoring this Courts' Clear Precedent.

Two bedrock limitations in patent law are: *first*, that a court may not read into a patent claims that are not there in order to limit the scope of the patent and thus to distinguish it from prior art, and *second*, that a patentee does not possess a true patent (and thus cannot defeat an anticipation defense) if he simply adapts for a new use a product another has already discovered. Here, the Federal Circuit ran afoul of both of these important principles.

As the Federal Circuit forthrightly noted: "The claims of the '393 patent recite either '[a]n unleaded gasoline suitable for combustion in an automotive engine' or [a]n unleaded gasoline fuel suitable for combustion in a spark ignition automotive engine." Pet. App. 10a. But fuels with the characteristics of the claims made in the Unocal '393 patent were already available in the prior art for use in such engines. See Pet. 21-22 and JA553-55.

To avoid this glaring problem, the District Court and the Federal Circuit both read a key limitation into the patent claims that was not actually present in the patent's text. Since it has no anchor in the patent's text, the lower courts could only describe the new claim limitation they were adding in conceptual terms alternately as "fuels that will *regularly* be used in autos" (an ambiguous term itself, since race cars are every bit as much autos as vehicles mass produced for the consumer market) or "*standard* automotive gasoline." Pet. App. 10a (emphasis added). On that basis, the lower courts were able to reject the refiners' anticipation defense to patent validity because the claims for racing gasolines and for "standard" or "regular[]" gasolines are different, *see id.* at 11a.

Of course, it has long been known that "[t]he difficulty [with

such an approach] is that, if we once begin to include elements not mentioned in the claim in order to limit such claim and avoid a defense of anticipation, we should never know where to stop." *McCarty v. Lehigh Valley R. Co.*, 160 U.S. 110, 116 (1895). The panel's lapse in this regard thus places its decision squarely in conflict with other cases of the Federal Circuit following *McCarty*.

Even if it were proper claim construction to engage in a process of judicial amendment of claims by insertion of additional limiting text where some judges exercising hindsight on the applicant's behalf might think it appropriate, the Federal Circuit's decision here would still not be free of error.

As an indication of the majority's hyper-technical *modus operandi*, the court failed to appreciate that it should make no difference whether the prior art containing identical or similar chemical properties involved "standard" gasolines or racing-car gasolines. "It is not an invention to perceive that the product which others had discovered had qualities they failed to detect." *General Elec. Co. v. Jewel Incandescent Lamp Co.*, 326 U.S. 242 (1945); *see also Ansonia Brass & Copper Co. v. Electrical Supply Co.*, 144 U.S. 11, 19 (1892); *Smith v. Nichols*, 88 U.S. (21 Wall.) 112, 119 (1874).

Whether Unocal's "innovation" was borrowed first-hand, from racing gasolines, or second hand, from racing gasolines by way of CARB's RFG regulations, the result should be the same – declaration of the '393 patent's invalidity and reversal of the judgment here.

CONCLUSION

The Federal Circuit's rationale upholding the Unocal patent should be reversed on the grounds set forth in this brief and in the brief of the Petitioners. This is plainly a case where the Federal Circuit lost the forest for the trees. Its overly technical parsing of the doctrines it has propounded to elucidate the patent laws failed to recognize the fundamental point that in this case Unocal had done no more than to hijack the

environmental regulations of a state body for its own private gain.

So that the Court can consider and properly resolve important questions of patent law in a case of great significance for the environment and the economy, General Motors respectfully requests that the Court grant the Petition for *certiorari*, and set this case for briefing and oral argument.

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